

REMARKS

In response to the Office communication, paper 11152005, mailed with the Office Action mailed November 10, 2004, Applicants request the Examiner consider the Supplemental IDS filed on November 15, 2004, which was a resubmission of the IDS filed on May 20, 2002.

In the Office Action mailed November 10, 2004, claims 13-17, 21, 23-27, 30-32, 35-37, 40 and 43 are objected to for having the limitation "adapted to." Applicants have amended each of the claims having "adapted to" in order to overcome the rejection. Claims 13, 21, 24-26, 31-45 are rejected under 35 USC §102(b) as being anticipated by Krishna et al. (US Patent 6,094,439, "Krishna"). Claims 1-12, 14-20, 27 and 28 are rejected under 35 USC §103(a) as being unpatentable over Krishna in view of Matsuura. Finally, claims 22, 23, 29 and 30 are rejected under 35 USC §103(a) as being unpatentable over Krishna in view of Bender et al. (EP-0676697, "Bender").

Response To Rejection Under 35 USC §102(B)

In response to the rejection of claims 13, 21, 24-26, 31-45 under 35 USC §102(b) as being anticipated by Krishna, Applicants have amended independent claims 13, 24, 31 and 43 to indicate that the CRC generator is implemented in the physical layer in application specific logic (or hard logic) of a programmable logic device. Unlike conventional devices, a CRC generator implemented in the link layer in programmable logic can occupy a significant portion of available resources of a programmable logic device, leaving few resources for other tasks. In contrast, Applicants in claims 13, 24, 31, and 43 include, among other features, a physical layer (i) having a CRC generator and (ii) instantiated in application-specific logic of a programmable logic device. While it is suggested in the Office Action that "monolithic integrated circuit 110" comprises an application specific logic/programmable logic device, there is no teaching or suggestion in Krishna that monolithic integrated circuit 110 is a programmable logic device.

Referring specifically to the claims, independent claim 13 has been amended to indicate that the network physical layer is (i) instantiated in application-specific logic of a programmable logic device, and (ii) comprises a data node coupled to receive a data

packet “from a link layer implemented in programmable logic of the programmable logic device.” That is, the CRC generator is implemented in the physical layer in application-specific logic of a programmable logic device. Accordingly, Applicants respectfully submit that claim 13 clearly distinguishes over Krishna.

Applicants have also amended independent claim 24 to indicate that the programmable logic device comprises:

- an array of configurable logic blocks comprising a link layer implemented in programmable logic for transmitting network data; and
  - a network physical layer instantiated in hard logic and coupled to receive network data from the link layer;
- wherein the physical layer comprises at least one CRC generator performing a cyclic redundancy check.

Applicants also respectfully submit that Krishna fails to disclose or suggest a programmable logic device having configurable logic blocks comprising a link layer and hard logic having a network physical layer as claimed by Applicants. Accordingly, Applicants respectfully request reconsideration of the rejection.

Similarly, Applicants have amended independent claim 31 to indicate that a network receiver is instantiated in application-specific logic of a programmable logic device, and having (i) a data node coupled to receive a packet assembly “from a link layer implemented in programmable logic of a programmable logic device and (ii) a CRC generator implemented in the physical layer. Accordingly, Applicants also submit that Krishna fails to disclose or suggest the network receiver having the arrangement of configurable logic blocks and hard logic as claimed by Applicants.

In response to the rejection of claim 37, Applicants respectfully submit that claim 37 as pending is allowable over Krishna, and has only been amended to overcome the objections to the claims. That is, Krishna fails to disclose or suggest a transmitter comprising a physical layer implemented in hard logic and a link layer implemented using programmable logic, as set forth in claim 37. Accordingly, Applicants respectfully request reconsideration of the rejection.

Finally, in response to the rejection of independent claim 43, Applicants have amended claim 43 to indicate that the receiver is implemented in hard logic of a

programmable logic device. Claim 43 has also been amended to indicate that the receiver has a physical layer comprising a CRC generator implemented in hard logic and a link layer implemented in programmable logic of the programmable logic device. Applicants respectfully submit that claim 43 as amended distinguishes over Krishna.

Response To Rejections Under 35 USC §102(B)

In response to the rejection of claims 1-12, 14-20, 27 and 28 under 35 USC §103(a) as being unpatentable over Krishna in view of Matsuura, Applicants respectfully submit that the claims as amended are allowable over the cited references. Matsuura is cited for disclosing the use of idle codes. However, Matsuura fails to overcome the deficiencies of the primary reference. That is, Matsuura fails to disclose or suggest the various elements of the claims implemented in application-specific logic and programmable logic as claimed. Accordingly, Applicants respectfully request reconsideration of the claims.

Note the labels in claims 1, 2, 13, and 24 have been removed as unnecessary and not for the purposes of patentability.

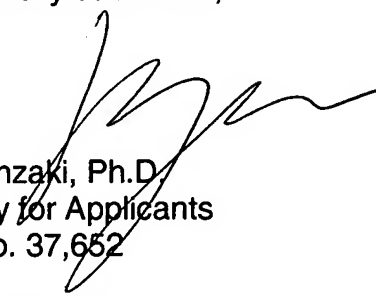
Finally, in response to the rejection of claims 22, 23, 29 and 30 under 35 USC §103(a) as being unpatentable over Krishna in view of Bender et al. (EP-0676697, "Bender"), Applicants also respectfully request reconsideration of the claims in view of the amendments. Bender is cited for disclosing a CRC terminal having a force-error input terminal. However, Bender also fails to overcome the deficiencies of the primary reference by failing to disclose or suggest the elements of the claims implemented in application-specific logic and programmable logic.

CONCLUSION

All claims should be now be in condition for allowance and a Notice of Allowance is respectfully requested.

If there are any questions, the applicants' attorney can be reached at Tel: 408-879-6149 (Pacific Standard Time).

Respectfully submitted,



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*I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on February 25, 2005.*

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Signature